

## CONICAL STUMP AFTER AMPUTATION IN CHILDHOOD.

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IN August, 1899, while on a fishing trip in the northwestern part of Colorado, about eighty miles from the railroad, I was



FIG. 1.

accosted by a young man of eighteen years who said that he desired to show me the result of an improperly made amputa-

tion of the arm. This amputation had been done for a crush of the arm some ten years before. The young man said that directly after the amputation was made the stump was in excellent condition, and it so remained for two or three years, but after that the bone began to press against the soft parts at the end of the stump, and, in time, to come through. This process had been gradual. He held the physician who had done the original amputation responsible for the result.

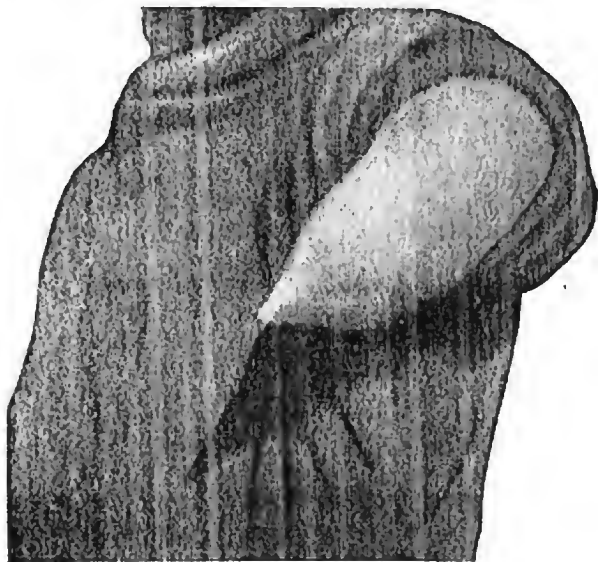


FIG. 2.

On examination I found that the left arm had been amputated near the junction of its upper third with the lower two-thirds. The stump was in a typically conical condition, the pointed end of the fragment of the humerus coming through the soft parts. Figs. 1 and 2, taken with a pocket kodak which I chanced to carry, show the condition very well.

It is needless to say that the proper management of this would rest on the removal of a suitable amount of bone. But

these cases have an important aspect, and that is this: After amputation through the upper part of the arm or the upper part of the leg in childhood, a slow development of a conical condition is physiological and is to be expected. This is quite independent of the nature of the stump after the original amputation. It is because the humerus and the leg bones are developed in large part from their upper epiphyses. The growth takes place at these epiphyses and simply pushes the bone down through the soft parts. Some years ago I presented (*New York Medical Record*, June 7, 1890, and April 7, 1894) a



FIG. 3.—Conical stump in child's arm after intra-uterine amputation. Patient at eleven years of age. (Owen.)

number of these cases before the New York Academy of Medicine.

Unless the child's parents are warned by the surgeon at the time of the first amputation of what is likely to occur, they may blame him when the conical condition appears. The principle is a fixed one; it should find a place in our text-books and it should be taught to students.

Mr. Edmund Owen records (*The Practitioner*, January, 1899) an interesting case (Fig. 3) of this condition following amputation of the arm *in utero*.